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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,573	06/24/2005	Naoki Kobayashi	016778-0498	6434
22428 7590 02/20/2008 FOLEY AND LARDNER LLP			EXAMINER	
SUITE 500			HUANG, WEN WU	
3000 K STREET NW WASHINGTON, DC 20007			ART UNIT	PAPER NUMBER
			2618	
			MAIL DATE	DELIVERY MODE
	•		02/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

•		Application No.	Applicant(s)			
Office Action Summary		10/540,573	KOBAYASHI ET AL.			
		Examiner	Art Unit			
		Wen W. Huang	2618			
	The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply					
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filled after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).						
Status						
 Responsive to communication(s) filed on 19 November 2007. This action is FINAL. 2b) This action is non-final. Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. 						
Disposition	on of Claims					
 4) Claim(s) 1-10 and 13-17 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-10 and 13-17 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement. 						
Application Papers						
10)□ T	The specification is objected to by the Examiner The drawing(s) filed on is/are: a) acce Applicant may not request that any objection to the o Replacement drawing sheet(s) including the correction The oath or declaration is objected to by the Examinary	epted or b) objected to by the E drawing(s) be held in abeyance. See on is required if the drawing(s) is obj	ected to. See 37 CFR 1.121(d).			
Priority u	nder 35 U.S.C. § 119					
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 						
	(s) of References Cited (PTO-892) of Draftsperson's Patent Drawing Review (PTO-948)	4)				
3) 🔲 Inform	ation Disclosure Statement(s) (PTO/SB/08) No(s)/Mail Date	5) Notice of Informal Pa				

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DETAILED ACTION

Claims 1-10 and 13-17 are pending.

Claims 11 and 12 are canceled.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 requires that the joint is sized to couple to the upper casing. However, the Examiner submits that nowhere in the specification of the instant application has support for the size of the joint or how the joint is sized.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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1. Claims 1, 5, 8, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harano (US PUB NO. 2002/0142794 A1) in view of Bickert et al. (US. 5,907,307; hereinafter "Bickert") and Ohara et al. (US. 6,661,391 B2; hereinafter "Ohara")

Regarding **claim 1**, Harano teaches a portable telephone (see Harano, fig. 8) comprising

an upper casing (see Harano, fig. 8, component 21) provided with a speaker (see Harano, fig. 8, component 25) and a display screen (see Harano, fig. 8, component 26) and a lower casing (see Harano, fig. 8, component 22) on which a keyboard is disposed (see Harano, fig. 8, component 23), wherein an antenna is mounted on an upper end of the upper casing (see Harano, fig. 8, component 23).

Harano is silent to teaching that wherein a dielectric member with a predetermined dielectric constant and little loss is mounted on a back side of the antenna such that the back side of the antenna is entirely coupled to and thereby covered by a surface of the dielectric member and such that the dielectric member is positioned farther away from a head of a user than the antenna is positioned with respect to the head of the user, when the user is operating the portable telephone,

wherein the antenna includes a joint provided at one end of the antenna that is sized to couple to the upper casing,

wherein the antenna is integrally coupled with the dielectric member,

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wherein the joint operates as a feeding section for feeding electricity supplied by the portable telephone to the antenna, and

wherein the joint corresponds to a feeding section that feeds power to the antenna from the portable telephone when the antenna and the dielectric member are coupled together. However, the claimed limitation is well known as evidenced by Bickert and Ohara.

In the same field of endeavor, Bickert teaches a portable telephone (see Bickert, fig. 3) wherein a dielectric member (see Bickert, fig. 2, dielectric object 12, col. 11, lines 60-67) with a predetermined dielectric constant and little loss (see Bickert, col. 12, lines 38-41) is mounted on a back side of the antenna (see Bickert, fig. 2, antenna 10) such that the back side of the antenna is entirely coupled to and thereby covered by a surface of the dielectric member (see Bickert, fig. 2 and 3, dielectric 12 covers antenna 10) and such that the dielectric member is positioned farther away from a head of a user (see Bickert, fig. 2, head 14) than the antenna is positioned with respect to the head of the user, when the user is operating the portable telephone (see Bickert, fig. 4, col. 12, lines 54-57),

wherein the antenna is integrally coupled with the dielectric member (see Bickert, fig. 2, dielectric object 12 and antenna 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano with the teaching of Bickert in order to re-direct harmful radio electromagnetic wave energy away from the user's head (see Bickert, col. 2, lines 45-48).

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The combination of Harano and Bickert is silent to teaching that
wherein the antenna includes a joint provided at one end of the antenna that is
sized to couple to the upper casing,

wherein the joint operates as a feeding section for feeding electricity supplied by the portable telephone to the antenna, and

wherein the joint corresponds to a feeding section that feeds power to the antenna from the portable telephone when the antenna and the dielectric member are coupled together. However, the claimed limitation is well known in the art as evidenced by Ohara.

In the same field of endeavor, Ohara teaches a portable telephone (see Ohara, fig. 9, mobile phone 26),

wherein the antenna includes a joint provided at one end of the antenna (see Ohara, fig. 3, col. 5, lines 5-12, antenna 11, feed metal fitting 14 and bottom end 13A) that is sized to couple to the upper casing (see Ohara, fig. 9, casing 27),

wherein the joint operates as a feeding section for feeding electricity supplied by the portable telephone to the antenna (see Ohara, fig. 9, col. 6-13, feeder 28), and

wherein the joint corresponds to a feeding section that feeds power to the antenna from the portable telephone when the antenna and the dielectric member are coupled together (see Ohara, fig. 9, col. 6-13, feeder 28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano and Bickert with the

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teaching of Ohara in order to high reliable and cost effective antenna for mobile phones (see Ohara, col. 2, lines 34-44).

Regarding **claim 5**, the combination of Harano, Bickert and Ohara also teaches the portable telephone according to claim 1, wherein the dielectric member has a curved surface on a side opposite to the antenna (see Bickert, fig. 2, dielectric 12, col. 11, lines 60-65).

Regarding **claim 8**, the combination of Harano, Bickert and Ohara also teaches the portable telephone according to claim 1, wherein the antenna is an inverted-L-shaped antenna (see Harano, fig. 5, component 11).

Regarding **claim 16**, Harano teaches a portable telephone (see Harano, fig. 8) comprising

an upper casing (see Harano, fig. 8, component 21) provided with a speaker (see Harano, fig. 8, component 25) and a display screen (see Harano, fig. 8, component 26) and a lower casing (see Harano, fig. 8, component 22) on which a keyboard is disposed (see Harano, fig. 8, component 23),

wherein an antenna is mounted on an upper end of the upper casing (see Harano, fig. 8, component 23).

Harano is silent to teaching that

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wherein a dielectric member with a predetermined dielectric constant and little loss is integrally coupled to the antenna,

wherein the antenna includes a joint provide don one end of the antenna that is configured to be coupled to either a back surface of the upper casing or a front surface of the lower casing,

wherein, when the antenna and dielectric member are connected to the upper casing, the dielectric member is positioned farther away from a head of a user than the antenna is positioned with respect to the head of the user, when the user is operating the portable telephone.

In the same field of endeavor, Bickert teaches a portable telephone (see Bickert, fig. 3)

wherein a dielectric member with a predetermined dielectric constant and little loss is integrally coupled to the antenna (see Bickert, fig. 2, dielectric object 12, col. 11, lines 60-67 and col. 12, lines 38-41),

wherein, when the antenna and dielectric member are connected to the upper casing, the dielectric member is positioned farther away from a head of a user (see Bickert, fig. 2, head 14) than the antenna is positioned with respect to the head of the user, when the user is operating the portable telephone (see Bickert, fig. 4, col. 12, lines 54-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano with the teaching of

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Bickert in order to re-direct harmful radio electromagnetic wave energy away from the user's head (see Bickert, col. 2, lines 45-48).

The combination of Harano and Bickert is silent to teaching that

wherein the antenna includes a joint provide don one end of the antenna that is configured to be coupled to either a back surface of the upper casing or a front surface of the lower casing. However, the claimed limitation is well known in the art as evidenced by Ohara.

In the same field of endeavor, Ohara teaches a portable telephone (see Ohara, fig. 9, mobile phone 26),

wherein the antenna includes a joint provided at one end of the antenna (see Ohara, fig. 3, col. 5, lines 5-12, antenna 11, feed metal fitting 14 and bottom end 13A) that is configured to be coupled to a back surface of the upper casing (see Ohara, fig. 9, casing 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano and Bickert with the teaching of Ohara in order to high reliable and cost effective antenna for mobile phones (see Ohara, col. 2, lines 34-44).

Regarding **claim 17**, the combination of Harano, Bickert and Ohara also teaches that wherein the joint corresponds to a feeding section that feeds power to the antenna from the portable telephone when the antenna and the dielectric member are fitted onto an outer surface of the portable telephone (see Ohara, fig. 9, col. 6-13, feeder 28).

2. Claims 3, 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harano, Bickert and Ohara as applied to claim 1 above, and further in view of Wong.

Regarding **claim 3**, the combination of Harano, Bickert and Ohara teaches the portable telephone according to claim 1.

The combination of Harano, Bickert and Ohara is silent to teaching that wherein the dielectric member is a dielectric member in shape of hemicylinder. However, the claimed limitation is well known in the art as evidenced by Wong.

In the same field of endeavor, Wong teaches a portable telephone wherein the dielectric member is a dielectric member in shape of hemicylinder (see Wong, fig. 2, component 18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Wong in order to direct harmful radio electromagnetic wave away from the user's head (see Wong, col. 2, lines 13-14; Bickert, col. 12, lines 3-4).

Regarding **claim 4**, the combination of Harano, Bickert and Ohara teaches the portable telephone according to claim 1.

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The combination of Harano, Bickert and Ohara is silent to teaching that wherein the dielectric member is a dielectric member in shape of rectangular. However, the claimed limitation is well known in the art as evidenced by Wong.

In the same field of endeavor, Wong teaches a portable telephone wherein the dielectric member is a dielectric member in shape of rectangular (see Wong, fig. 4, component 18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Wong in order to direct harmful radio electromagnetic wave away from the user's head (see Wong, col. 2, lines 13-14; Bickert, col. 12, lines 3-4).

Regarding **claim 7**, the combination of Harano, Bickert and Ohara teaches the portable telephone according to claim 1.

The combination of Harano, Bickert and Ohara is silent to teaching that wherein the antenna is a dipole antenna. However, the claimed limitation is well known in the art as evidenced by Wong.

In the same field of endeavor, Wong teaches a portable telephone wherein the antenna is a dipole antenna (see Wong, col. 2, lines 49-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Wong in order to direct harmful radio electromagnetic wave away from the user's head (see Wong, col. 2, lines 13-14).

et al. (US. 7,031,762 B2; hereinafter "Shoji")

3. Claims 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harano, Bickert and Ohara as applied to claim 1 above, and further in view of Shoji

Regarding **claim 6**, the combination of Harano, Bickert and Ohara also teaches the portable telephone according to claim 1.

The combination of Harano, Bickert and Ohara is silent to teaching that wherein the antenna is a built-in antenna built in the upper casing. However, the claimed limitation is well known in the art as evidenced by Shoji.

In the same field of endeavor, Shoji teaches a portable telephone wherein the antenna is a built-in antenna built in the upper casing (see Shoji, fig. 9, component 50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Shoji in order to alleviate degradation of antenna gain (see Shoji, col. 1, lines 44-46).

Regarding **claim 9**, the combination of Harano, Bickert and Ohara teaches the portable telephone according to claim 1.

The combination of Harano, Bickert and Ohara is silent to teaching that wherein the antenna is a monopole antenna. However, the claimed limitation is well known in the art as evidenced by Shoji.

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In the same field of endeavor, Shoji teaches a portable telephone wherein the antenna is a monopole antenna (see Shoji, col. 2, line12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Shoji in order to alleviate degradation of antenna gain (see Shoji, col. 1, lines 44-46).

Regarding **claim 10**, the combination of Harano, Bickert and Ohara teaches the portable telephone according to claim 1.

The combination of Harano, Bickert and Ohara is silent to teaching that wherein the antenna is a meander antenna. However, the claimed limitation is well known in the art as evidenced by Shoji.

In the same field of endeavor, Shoji teaches a portable telephone wherein the antenna is a meander antenna (see Shoji, col. 2, line 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Shoji in order to alleviate degradation of antenna gain (see Shoji, col. 1, lines 44-46).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harano, Bickert and Ohara as applied to claim 1 above, and further in view of Filipovic (US. 6,590,544 B1).

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Regarding **claim 2**, the combination of Harano, Bickert and Ohara teaches the portable telephone according to claim 1.

The combination of Harano, Bickert and Ohara is silent to teaching that wherein the dielectric member is a dielectric member in shape of hemisphere. However, the claimed limitation is well known in the art as evidenced by Filipovic.

In the same field of endeavor, Filipovic teaches an antenna wherein the dielectric member is a dielectric member in shape of hemisphere (see Filipovic, col. 2, lines 39-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano, Bickert and Ohara with the teaching of Filipovic in order to improve the directivity of the antenna (see Filipovic, col. 2, lines 22-23; Bickert, col. 12, lines 3-4).

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fehrm (US. Pub No. 2003/0232628 A1) in view of Wong (US. 6,615,026 B1).

Regarding **claim 13**, Fehrm teaches a portable telephone (see Fehrm, fig. 1) comprising

an upper casing (see Fehrm, fig. 1, component 1) provided with a speaker (see Fehrm, fig. 1, component 6) and a display screen (see Fehrm, fig. 1, component 4) and a lower casing (see Fehrm, fig. 1, component 2) on which a keyboard is disposed (see

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Fehrm, fig. 1, component 8), wherein an antenna is mounted on a lower end of the lower casing on an outer surface of the lower casing (see Fehrm, fig. 1, component 11).

Fehrm is silent to teaching that wherein a dielectric member with a predetermined dielectric constant and little loss is mounted on a front side of the antenna such that the front side of the antenna is entirely coupled to and thereby covered by a surface of the dielectric member and such that the dielectric member is positioned farther from where a palm of a user is located than the antenna is positioned with respect to the palm of the user, when the user is holding the portable telephone within the palm in order to operate the portable telephone. However, the claimed limitation is well known as evidenced by Wong.

In the same field of endeavor, Wong teaches a portable telephone wherein a dielectric member (see Wong, fig. 1, component 18) with a predetermined dielectric constant and little loss (see Wong, col. 3, lines 10-15) is mounted on a front side of the antenna (see Wong, fig. 1, component 12) such that the front side of the antenna is entirely coupled to and thereby covered by a surface of the dielectric member (see Wong, figs. 1-4) such that the dielectric member is positioned farther from where a palm of a user is located than the antenna is positioned with respect to the palm of the user, when the user is holding the portable telephone within the palm in order to operate the portable telephone (see Wong, fig. 1 and 4; component 12 is closer to the back surface of the portable telephone where the user's palm is placed than component 18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Fehrm with the teaching of

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Wong in order to direct harmful radio electromagnetic wave away from the user's head (see Wong, col. 2, lines 13-14).

Regarding **claim 14**, the combination of Fehrm and Wong also teaches the portable telephone according to claim 13, wherein the antenna is connected to a printed circuit board built in the lower casing (see Wong, fig. 1).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fehrm and Wong as applied to claim 13 above, and further in view of Ohara.

Regarding **claim 15**, the combination of Fehrm and Wong teaches the portable telephone according to claim 13.

The combination of Fehrm and Wong is silent to teaching that comprising: a joint provided on one end of the antenna,

wherein the dielectric member is integrally formed with the antenna,

wherein the joint corresponds to a feeding section that feeds power to the antenna from the portable telephone when the antenna and the dielectric member are coupled to the lower casing.

In the same field of endeavor, Ohara teaches a portable telephone (see Ohara, fig. 9, mobile phone 26) comprising,

a joint provided on one end of the antenna (see Ohara, fig. 3, col. 5, lines 5-12, antenna 11, feed metal fitting 14 and bottom end 13A),

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wherein the dielectric member is integrally formed with the antenna (see Ohara, fig. 1, dielectric member 15 and 16; antenna 11; col. 5, lines 13-22),

wherein the joint corresponds to a feeding section that feeds power to the antenna from the portable telephone when the antenna and the dielectric member are coupled to the lower casing (see Ohara, fig. 9, col. 6-13, feeder 28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Harano and Bickert with the teaching of Ohara in order to high reliable and cost effective antenna for mobile phones (see Ohara, col. 2, lines 34-44).

Response to Arguments

Applicant's arguments with respect to claims 1 and 16 have been considered but are most in view of the new ground(s) of rejection.

Applicant's arguments filed 11/19/07 with respect to claims 5 and 13 have been fully considered but they are not persuasive.

Regarding claim 5, Applicant argues that fig. 2 of Bickert is a two-dimensional figure showing a curved region representing the dielectric member and does not teach a three-dimensional curve surface. However, the Examiner respectfully disagrees.

As the Examiner cited in the previous Office Action rejecting the parent claim 1, col. 11, lines 60-67 of Bickert teaches that the curved region of the dielectric member

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shown in fig. 2 is the cross section extending at all point along the Z-axis (see fig. 3 of Bickert). Thus, the Examiner submits that fig. 2 and 3 of Bickert show a three-dimensional curved surface of the dielectric member 12.

Regarding claim 13, Applicant argues that Fehrm teaches an antenna mounted on the outer surface of the mobile phone and Wong teaches an antenna mounted inside of the mobile phone. Thus, Applicants asserts that the combination of Fehrm and Wong is improper. However, the Examiner respectfully disagrees.

More specifically, the Examiner submits that Wong explicitly teaches that Wong's invention is not limited to the built-in antenna and other types of antennas, such as outer surface mounted antenna 20, can also be utilized (see Wong, col. 2, lines 46-54). Thus, the Examiner submits that the combination of Fehrm and Wong is proper.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen W. Huang whose telephone number is (571) 272-7852. The examiner can normally be reached on 10am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wwh

MATTHEW ANDERSON SUPERVISORY PATENT EXAMINER

Mmy

M 7/13/08